

Amendments to claims

The listing of claims will replace the previous version, and the listing of claims:

Listing of Claims

1. (currently amended) A coating liquid for forming an amorphous silica-based coating film with a low dielectric constant having a high film strength and excellent hydrophobic property and capable of ensuring smoothness of a surface coated therewith,

wherein the coating liquid contains tetraalkyl ammonium hydroxide (TAAOH) purified to remove impurities comprising compounds of alkali metal elements and halogen group elements, and a silicon compound obtained by hydrolyzing tetraalkyl ortho silicate (TAOS) and alkoxy silane (AS) expressed by the following general formula (I) in the presence of the tetraalkyl ammonium hydroxide (TAAOH):



wherein X indicates a hydrogen atom, a fluorine atom, or an alkyl group, a fluorine-substituted alkyl group, an aryl group or a vinyl group each having 1 to 8 carbon atoms; R indicates a hydrogen atom, or an alkyl group, an aryl group or a vinyl group each having 1 to 8 carbon atoms; and n is an integral number from 1 to 3.

2. (currently amended) A coating liquid for forming an amorphous silica-based coating film with a low dielectric constant having a high film strength and excellent hydrophobic property and capable of ensuring smoothness of a surface coated therewith,

wherein the coating liquid contains tetraalkyl ammonium hydroxide (TAAOH) purified to remove impurities comprising compounds of alkali metal elements and halogen group elements, and a silicon compound obtained by hydrolyzing or partially

hydrolyzing tetraalkyl ortho silicate (TAOS) in the presence of the tetraalkyl ammonium hydroxide (TAAOH), mixing a reaction product with ~~the~~ alkoxysilane (AS) expressed by the following general formula (I) ~~above~~ or a hydrolysate or a partial hydrolysate thereof, and further hydrolyzing all or a portion of a mixture: ~~according to the necessity.~~



wherein X indicates a hydrogen atom, a fluorine atom, or an alkyl group, a fluorine-substituted alkyl group, an aryl group or a vinyl group each having 1 to 8 carbon atoms; R indicates a hydrogen atom, or an alkyl group, an aryl group or a vinyl group each having 1 to 8 carbon atoms; and n is an integral number from 1 to 3.

3. (previously presented) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein said tetraalkyl ortho silicate (TAOS) is tetraethyl ortho silicate (TEOS), tetramethyl ortho silicate (TMOS) or a mixture thereof.

4. (previously presented) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein said alkoxysilane (AS) is methyltrimethoxy silane (MTMS), methyltriethoxy silane (MTES) or a mixture thereof.

5. (previously presented) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein said tetraalkyl ammonium hydroxide (TAAOH) is tetrapropyl ammonium hydroxide (TPAOH), tetrabutyl ammonium hydroxide (TBAOH) or a mixture thereof.

6. (previously presented) The coating liquid for forming a

silica-based coating film with a low dielectric constant according to claim 1, wherein a content of impurities comprising compounds of alkali metal elements such as sodium (Na) and potassium (K) in said tetraalkyl ammonium hydroxide (TAAOH) is 50 ppb by weight or below on respective element bases.

7. (previously presented) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein a content of impurities comprising compounds of halogen group elements such as bromine (Br) and chlorine (Cl) in said tetraalkyl ammonium hydroxide (TAAOH) is 1 ppm by weight or less on respective element bases.

8. (currently amended) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein a molar ratio (TAOS/AS) of said tetraalkyl ortho silicate (TAOS) and said alkoxysilane (AS) is in a range from 6/4 to 2/8 ~~in terms of SiO₂~~.

9. (currently amended) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein a molar ratio (TAAOH/(TAOS+AS)) of said tetraalkyl ammonium hydroxide (TAAOH) and the components for forming the silica-based coating film (TAOS+AS) is in a range from 1/10 to 7/10 ~~in terms of SiO₂~~.

10. (previously presented) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 1, wherein the coating liquid contains a silicon compound as a hydrolysate of said tetraalkyl ortho silicate (TAOS) and said alkoxysilane (AS) by 2 to 40% by weight.

11-28. (canceled)

29. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein said tetraalkyl ortho silicate (TAOS) is tetraethyl ortho silicate (TEOS), tetramethyl ortho silicate (TMOS) or a mixture thereof.

30. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein said alkoxysilane (AS) is methyltrimethoxy silane (MTMS), methyltriethoxy silane (MTES) or a mixture thereof.

31. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein said tetraalkyl ammonium hydroxide (TAAOH) is tetrapropyl ammonium hydroxide (TPAOH), tetrabutyl ammonium hydroxide (TBAOH) or a mixture thereof.

32 (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein a content of impurities comprising compounds of alkali metal elements such as sodium (Na) and potassium (K) in said tetraalkyl ammonium hydroxide (TAAOH) is 50 ppb by weight or below on respective element bases.

33. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein a content of impurities comprising compounds of halogen group elements such as bromine (Br) and chlorine (Cl) in said tetraalkyl ammonium hydroxide (TAAOH) is 1 ppm by weight or less on respective element bases.

34. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein a molar ratio (TAOS/AS) of said tetraalkyl ortho silicate (TAOS) and said alkoxysilane (AS) is in a range from 6/4 to 2/8.

35. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein a molar ratio (TAAOH/(TAOS+AS)) of said tetraalkyl ammonium hydroxide (TAAOH), and the components for forming the silica-based coating film (TAOS+AS) is in a range from 1/10 to 7/10.

36. (new) The coating liquid for forming a silica-based coating film with a low dielectric constant according to claim 2, wherein the coating liquid contains a silicon compound as a hydrolysate of said tetraalkyl ortho silicate (TAOS) and said alkoxysilane (AS) by 2 to 40% by weight.